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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,575	04/07/2004	Scott E. Moore	MI22-2493	8575
21567	7590	11/30/2005	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			PUNNOOSE, ROY M	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. ☒

10/820,575

Applicant(s)

MOORE ET AL

Examiner

Roy M. Punnoose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-21, 49-52 and 59-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 64 is/are allowed.
- 6) ☒ Claim(s) 19-21, 49-52, 59-63 and 6574 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Acknowledgement is made of applicant's amendment filed on August 19, 2005. The amendments and the remarks presented by the applicant have been entered into the records.
2. The applicant has added new claims 65-74, and cancelled previously claims 1-18, 22-48 and 53-58. Currently claims 19-21, 49-52 and 59-74 are pending in the application.
3. Contrary to applicant's remarks, the Boyer (US_5,446,531) patent alone (which was used in the last office action) reads on several limitations of applicant's claimed invention, which is the subject of this office action.

Information Disclosure Statement

4. The information disclosure statement filed on 4/7/2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The prior art cited under "Other References" on page 2 of the PTO-1449 were not available to the Examiner. The websites listed were **not valid** or not accessible to the Examiner. The Examiner checked the files of 09/521,092 and found no record of the listed websites in its IDS filings. Therefore the listings of said IDS were **not considered.**

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 19-21, 49, 51, 59-62, 67-68 and 72-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyer et al (US_5,446,531).

7. Claims 19-21, 49, 51, 59-62, 67-68 and 72-73 are rejected because Boyer et al (Boyer hereinafter) discloses an apparatus comprising: a container 70 (see col.9, lines 57+; Figure 6) configured to provide a subject material in a substantially static state; and at least one sensor 36 (see Figure 7) provided at a predefined position relative to the container 70 to monitor the turbidity of the subject material at a desired vertical position (see Figure 6) of the container 70 (see abstract), wherein the at least one sensor (entire Figure 7 is a sensor) comprises a plurality of sensors 36, 40, provided at different predefined positions relative to the container 70 to monitor the turbidity of the subject material at a plurality of desired vertical positions (see Figure 6) of the container, wherein the at least one sensor comprises: a source 34 configured to emit electromagnetic energy towards the container 70 (see arrow in Figure 6); and a receiver 36 configured to receive at least some of the electromagnetic energy, and generating a signal indicative of the turbidity of the subject material after the monitoring, and, wherein the monitoring comprises emitting electromagnetic energy E (see Figure 7) towards the subject material, and receiving at least some of the electromagnetic energy, and, monitoring the turbidity of the subject material provided in the substantially static condition (see col.6, line 53- col.19, line 39; Figures 5 and 6).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 50, 63, 65-66 and 70-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyer et al (US_5,446,531).

10. Claim 50 is rejected because Boyer teaches all claim limitations as disclosed above except for monitoring the turbidity of the subject material at another predefined vertical position within the container. However, in view of Boyer's teaching of monitoring turbidity at both vertical (see Figure 6) and horizontal (see Figure 5) positions, it would have been obvious to one of ordinary skill in the art at the time the invention was made to monitor the turbidity at any desired location or position in order to accurately measure the turbidity at the selected location.

11. Claim 63 is rejected because Boyer teaches all claim limitations as disclosed above except that the apparatus further comprises a process chamber configured to receive and process a semiconductor workpiece using the subject material. However, in view of Boyer's teaching of monitoring turbidity at any desired location because the sensor cluster is portable and attachable to any container or chamber, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the apparatus further comprise a process chamber configured to receive and process a semiconductor workpiece using the subject material so that the turbidity of a slurry can be measured.

12. Claims 65-66 and 70-71 are rejected because Boyer teaches all claim limitations as disclosed above except for the explicit disclosure of the apparatus monitoring the settling of the particulate matter, or the precipitation rate of the particulate matter. However, in view of Boyer's teaching of monitoring turbidity at any desired location because the sensor cluster is

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portable and attachable to any container or chamber, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the apparatus placed at any desired location and monitor the settling of the particulate matter, or the precipitation rate of the particulate matter, because by monitoring turbidity at desired intervals, the precipitation or settling rate can be determined.

13. Claims 52, 69 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyer et al (US_5,446,531) in view of Mian et al (US_6,319,469).

14. Claims 52, 69 and 74 are rejected because Boyer teaches all claim limitations as disclosed above except for the rotating of the subject material during the monitoring so that the settling rate due to centrifugal force can be monitored. Mian et al (Mian hereinafter) discloses rotating of the subject material during the monitoring in a turbidity monitoring apparatus (see col.22, lines 57+) so that the settling rate due to centrifugal force can be monitored for determine the type of settling particles. Therefore, in view of Mian's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate rotating of the subject material during the monitoring in a turbidity monitoring apparatus so that the settling rate due to centrifugal force can be monitored for determine the type of settling particles.

Allowable Subject Matter

15. Claim 64 would be allowable because none of the prior art references disclose a sensor comprising a housing that is configured to attach to a supply connection containing a subject material and detach from the supply connection without disruption of the flow of subject material within the supply connection.

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**.

The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2059**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Roy M. Punnoose
Patent Examiner
Art Unit 2877
November 27, 2005




Gregory J. Toatley, Jr.
Supervisory Patent Examiner